WORKSHEET FOR CMD LINEAR EQUATION

Definitions:

Point 2, having coordinates (x_2,y_2) is selected to represent the concrete mix design (CMD) which has a target air content and unit weight as follows:

$x_2 = 6.5\ \%$

$y_2 = \sum$ Design Batch Weights $\div$ 1.0000 m^3

$y_2 =$ _____ kg $\div$ 1.0000 m^3

$y_2 =$ _____ kg/m^3 (rounded to 1 kg/m^3)

Point1, having coordinates (x_1,y_1) is selected to represent the y-intercept which has a theoretical air content and unit weight as follows:

$x_1 = 0.0\ \%$

$y_1 = \sum$ Design Batch Weights $\div$ 0.9350 m^3

$y_1 =$ _____ kg $\div$ 0.9350 m^3

$y_1 =$ _____ kg/m^3 (rounded to 1 kg/m^3)

Solution:

slope = $m = (y_2-y_1) / (x_2-x_1)$

$m =$ (_____-_____) / (6.5 – 0.0)

$m =$ (_____) / (6.5)

$m =$ _____ (negative value, rounded to the first decimal place)

y-intercept = $b = y_1$

$b =$ _____ kg/m^3

Linear Equation:

Predicted Unit Weight = m (Air) + b

Predicted Unit Weight = _____ (Air) + _____

(note: calculation for Predicted Unit Weight is to be rounded to 1 kg/m^3)